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EXAMINER
NICKERSON, JEFFREY L

ART UNIT	PAPER NUMBER
2442	

NOTIFICATION DATE	DELIVERY MODE
11/06/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>02 September 2008</u>.

2a)☒ This action is FINAL.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>9-15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>9-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>02 September 2008</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to Application No. 10/587,471 filed nationally

on 16 March 2007 and internationally on 28 January 2005. The amendment presented

on 02 September 2008, which cancels claims 1-8, adds claims 9-15, and provides

replacement drawings and change to the specification and abstract, is hereby

acknowledged. Claims 9-15 have been examined.

Drawings

2.   The replacement drawings presented on 02 September 2008 are accepted. All

outstanding objections to the drawings are hereby withdrawn.   However, a new

objection is being made below.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(o) because

Figure 2 does not include a suitable indication of what the drawing represents. For

messaging sequence diagrams, the general content of **each** message step should be

identified (e.g. request, translated request, bundled request, response, ack, etc), and

each entity performing the messages (1-10, across the top) should also be identified.

The specification should not be needed in order to understand the figures.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement

drawing sheet should include all of the figures appearing on the immediate prior version

of the sheet, even if only one figure is being amended. Each drawing sheet submitted

after the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. **The objection to the drawings will not be**

held in abeyance.

Specification

4.   The amendment presented on 02 September 2008 providing change to the

abstract and specification is noted. All outstanding objections to the specification are

hereby withdrawn.

Claim Objections

5.   Claims 9, 12, and 15 are objected to because of the following informalities:

unclear transitional phrase(s). Appropriate correction is required.

Regarding claims 9 and 12, these claims contain the transitional phrase "with" between

the preamble and claim limitations. This is not a standard transitional phrase, nor is its

inclusive/exclusive property defined in the MPEP. For purposes of further examination

the examiner will consider the term inclusive. See MPEP 2111.03 and 2111.04.

Furthermore, the articulated claim limitations of claim 15 (to a method) contain system-

like language. Steps of a method should start with verb.

Regarding claim 15, this claim contains no transitional phrase. For purposes of further examination the examiner will consider the phrase to be "wherein".

Claim Rejections - 35 USC § 112

6.   The amendment presented on 02 September 2008 cancelling claims 1-8 is noted. All outstanding rejections under 35 USC 112 are therefore obviated and hereby withdrawn.

Response to Arguments

7.   Applicant's arguments filed 02 September 2008 have been fully considered but they are not persuasive.

Independent claims 9 and 12

Applicant argues the combined teachings of Wei (US 5,778,228) and Shakib (US 6,321,274) do not teach the following limitation:

> *"an optimization layer being implemented at the client end in addition to the other local proxies, and being designed to carry out client-end optimization and to combine call groups and, furthermore, with a general proxy being installed, which is designed to carry out grouped service calls, and to return response messages to the optimization layer."*

The examiner respectfully disagrees. Shakib teaches an optimization layer being implemented at the client end in addition to the other local proxies, and being designed to carry out client-end optimization and to combine calls groups (Shakib: Figure 2, item 135; col 3, lines 45-49), and a general proxy being installed, which is designed to carry out grouped service calls, and to return response messages to the optimization layer (Shakib: Figure 2, item 140; col 3, lines 50-58).

Applicant further argues it would not be obvious to combine the teachings of Wei and Shakib.

The examiner respectfully disagrees. Shakib specifically states that "combining calls into a single request will permit more efficient operation of the server when calls are related to each other" (Shakib: col 1, lines 59-67). Therefore, utilizing Shakib's optimization layer in any RPC environment would be obvious.

Applicant further argues that the combined teachings of Wei and Shakib do not teach the following limitation:

> *"wherein the optimization layer contains at least one cache, with whose aid service calls can be avoided or delayed."*

The examiner respectfully disagrees. Shakib teaches the use of a request and lookup table for bundling RPCs. If RPCs can be deferred, they are added to the bundle and associated pointers added to the lookup table (Shakib: Figure 6; col 5, line 41 - col 18).

Therefore, the rejections of these claims are hereby maintained.

Dependent claims 10-11 and 13-15

Applicant argues these claims conditionally on the arguments of their parent independent claims.

Therefore, the rejections of these claims are hereby maintained.

Claim Rejections - 35 USC § 103

8.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wei (US 5,778,228), and in further view of Shakib et al (US 6,321,274 B1).

Regarding claim 9, Wei teaches a system for communication between remote objects which are provided with service providers whose methods can be accessed as web

services (Wei: col 1, lines 19-41), and client-end local proxies in the Internet or a LAN

(Wei: col 1, lines 19-41; col 3, lines 1-10), with:

a general service being installed in addition to the existing web services at the

service provider end and being designed to switch one or more service calls from a

client to the available services, and to transmit one or more response messaged to the

client (Wei: abstract; col 5, lines 49-53; See also Figure 6, item 616 into 620);

at the client end, in addition to the other local proxies, a general proxy (generic

client stub) being installed which is designed to carry out service calls, and to return

response messages to the applications (Wei: abstract; col 5, lines 38-48; See also

Figure 6, item 612 into 610).

Wei does not teach an optimization layer being implemented at the client end in

addition to the other local proxies, and being designed to carry out client-end

optimization and to combine call groups, and to return response messages to the

optimization layer; and

wherein the optimization layer contains at least one cache, with whose aid

service calls can be avoided or delayed.

Shakib, in a similar field of endeavor, teaches an optimization layer being

implemented at the client end in addition to the other local proxies, and being designed

to carry out client-end optimization and to combine call groups, and to return response

messages to the optimization layer (Shakib: abstract; col 3, lines 45-49; See also Figure

2, items 135 and 150; Figure 3); and

wherein the optimization layer contains at least one cache, with whose aid service calls can be avoided or delayed (Shakib: Figure 6; col 5, line 41 - col 18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Shakib for bundling RPCs. The teachings of Shakib, when implemented in the Wei system, will allow one of ordinary skill in the art to use generic client and server stubs while bundling RPCs. One of ordinary skill in the art would be motivated to utilize the teachings of Shakib in the Wei system in order to "combin[e] calls into a single request [that] will permit more efficient operation of the server when calls are related to each other" (Shakib: col 1, lines 59-67).

10.   Claims 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wei US 5,778,228), in view of Shakib et al (US 6,321,274 B1), and in further view of Kumar et al (US 7,130,890 B1).

Regarding claim 10, the Wei/Shakib system teaches wherein the client is designed by means of an optimization layer and the general proxy to initiate communication with a service provider (Wei: abstract; Shakib: abstract).

The Wei/Shakib system does not teach initiating communication without any call from a client application in order to update stored information.

Kumar, in a similar field of endeavor, teaches initiating communication without any call from a client application in order to update stored information (Kumar: abstract).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Kumar for monitoring user request

tendencies and prefetching resources automatically without application initiation. The

teachings of Kumar, when implemented in the Wei/Shakib system, will allow one of

ordinary skill in the art to RPC requests and prefetch resources. One of ordinary skill in

the art would be motivated to utilize the teachings of Kumar in the Wei/Shakib system in

order to spread out updating cached resources so that resource requests are not bursty.

11.   Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wei (US 5,778,228) and Shakib et al (US 6,321,274 B1), and in further view of

Krishnamurthy et al (US 6,578,113 B2).

Regarding claim 11, the Wei/Shakib system teaches wherein the client is designed by

means of the optimization layer and the general proxy to manage the data in the cache

(Wei: abstract; Shakib: abstract; Figure 6; col 5, line 41 - col 18); and wherein

transmissions are of call groups (Shakib: col 3, lines 45-49).

The Wei/Shakib system does not teach requesting piggyback information

together with the transmission and the reverse transmission of responses from the

service provider, in order to update and validate the data in the cache.

Krishnamurthy, in a similar field of endeavor, teaches requesting piggyback

information together with the transmission and the reverse transmission of responses

from the service provider, in order to update and validate the data in the cache

(Krishnamurthy: abstract).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Krishnamurthy for piggybacking validation

requests. The teachings of Krishnamurthy, when implemented in the Wei/Shakib

system, will allow one of ordinary skill in the art to piggyback cache validation requests

onto bundled RPCs. One of ordinary skill in the art would be motivated to utilize the

teachings of Krishnamurthy in the Wei/Shakib system in order to reduce network traffic

while maintaining cache coherency.

Regarding claim 12, this method claim contains limitations found within claims 9 and 11,

and the same rationale of rejection is used, where applicable.

Regarding claim 13, this method claim contains limitations found within claim 11, and

the same rationale of rejection is used, where applicable.

12.   Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Wei (US 5,778,228), in view of Shakib et al (US 6,321,274 B1) and Krishnamurthy et al

(US 6,578,113 B2), and in further view Kumar et al (US 7,130,890 B1).

Regarding claim 14, the Wei/Shakib/Krishnamurthy system teaches wherein the

optimization layer communications with a service provider for management, in particular

for updating and in validation, of the data in the cache (Shakib: abstract; Krishnamurthy: abstract).

The Wei/Shakib/Krishnamurthy system does not teach initiating communication without any call from a client application.

Kumar, in a similar field of endeavor, teaches initiating communication without any call from a client application (Kumar: abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Kumar for monitoring request tendencies and prefetching resources automatically without application initiating the requests. The teachings of Kumar, when implemented in the Wei/Shakib/Krishnamurthy system, will allow one of ordinary skill in the art to RPC requests and prefetch resources. One of ordinary skill in the art would be motivated to utilize the teachings of Kumar in the Wei/Shakib/Krishnamurthy system in order to spread out updating cached resources so that resource requests are not bursty.

Regarding claim 15, this method claim contains limitations found within claim 14 and the same rationale of rejection is used, where applicable.

Cited Pertinent Prior Art

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

     a.   Baldiga et al (US 5,613,155) discloses bundling client requests to a

     server.

Conclusion

14.   Applicant's amendment necessitated the new ground(s) of rejection presented in

this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

CFR 1.136(a).

     A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./
Jeffrey Nickerson
Examiner, Art Unit 2442

/Andrew Caldwell/
Supervisory Patent Examiner, Art Unit 2442